

Course: Anatomy with Organogenesis of Domestic Animals III

UNIVERSITY OF ZAGREB
FACULTY OF VETERINARY MEDICINE

Heinzelova 55

Tel. 01/2390243

Division: Basic and Pre-clinical Sciences

Organizational unit: Anatomy, Histology and Embryology

E-mail of the course leader: mpavic@vef.unizg.hr

Register No of the organizational unit: 61-05-2025/296

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Veterinarski fakultet u Zagrebu			
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Urudžbeni broj	Prilozi	Vrijednost	
251-61-05-25-40	0	-	

COURSE SYLLABUS

Course name: Anatomy with Organogenesis of Domestic Animals III

Academic year 2025/2026

Course leader: Assist. Prof. Mirela Pavić Vulinović

Deputy course leader: Assist. Prof. Ivan Alić

Teachers: Full Prof. Martina Đuras, Full Prof. Srebrenka Nejedli, Full Prof. Tajana Trbojević Vukičević, Assist. Prof. Ivan Alić, Assist. Prof. Mirela Pavić Vulinović, teaching assistant Magdalena Kolenc, DVM, PhD, teaching assistant Kim Korpes, DVM, PhD, teaching assistant Mirna Mandić, DVM, teaching assistant Ante Plećaš, DVM

First day of classes: 29/09/2025

Last day of classes: 19/11/2025

Activities - Anatomy with Organogenesis of Domestic Animals III (1/7)

Start Dat	Start	End	Subject	Subject	Group	Note	Length	Instructor	Room
29/09/2025	10:00	11:30	Anatomy with Organogenesis of Domestic Animals III	p01 Head skeleton and cervical spine	3E-1, 3E-2, 3E-3		1:30	Trbojević-Vukičević T.	P_amfiteatar
29/09/2025	11:45	13:15	Anatomy with Organogenesis of Domestic Animals III	v01 Cervical vertebrae	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
30/09/2025	10:15	11:45	Anatomy with Organogenesis of Domestic Animals III	v02 Cranial bones I	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
01/10/2025	10:15	11:45	Anatomy with Organogenesis of Domestic Animals III	v03 Cranial bones II	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
02/10/2025	8:15	9:45	Anatomy with Organogenesis of Domestic Animals III	v04 Facial bones I	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
03/10/2025	10:00	11:30	Anatomy with Organogenesis of Domestic Animals III	v05 Facial bones II	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat

Activities - Anatomy with Organogenesis of Domestic Animals III (2/7)

Start Dat	Start	End	Subject	Subject	Group	Note	Length	Instructor	Room
03/10/2025	13:00	13:45	Anatomy with Organogenesis of Domestic Animals III	p02 Head and neck muscles	3E-1, 3E-2, 3E-3		0:45	Đuras M.	P_amfiteatar
03/10/2025	13:45	14:30	Anatomy with Organogenesis of Domestic Animals III	P3 Blood supply,lymphatic system and endocrine tissues	3E-1, 3E-2, 3E-3		0:45	Đuras M.	P_amfiteatar
06/10/2025	8:15	9:45	Anatomy with Organogenesis of Domestic Animals III	v06 Hyoid apparatus and skull as whole	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
07/10/2025	8:15	9:45	Anatomy with Organogenesis of Domestic Animals III	V07 1st activity test (2 points):cervical verte.,bones of the skull	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
08/10/2025	14:30	16:00	Anatomy with Organogenesis of Domestic Animals III	v08 Regions and skin muscles of the head and neck. Facial muscles	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
09/10/2025	11:45	13:15	Anatomy with Organogenesis of Domestic Animals III	v09 Mandibular muscles	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat

Activities - Anatomy with Organogenesis of Domestic Animals III (3/7)

Start Dat	Start	End	Subject	Subject	Group	Note	Length	Instructor	Room
10/10/2025	11:00	12:30	Anatomy with Organogenesis of Domestic Animals III	v10 Superficial structures of facial regions	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
13/10/2025	8:15	9:45	Anatomy with Organogenesis of Domestic Animals III	v11 Mucles of the neck I	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
14/10/2025	11:45	13:15	Anatomy with Organogenesis of Domestic Animals III	v12 Mucles of the neck II and the nuchal ligament	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
15/10/2025	12:00	13:30	Anatomy with Organogenesis of Domestic Animals III	v13 2nd activity test	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
17/10/2025	8:15	9:45	Anatomy with Organogenesis of Domestic Animals III	V14 Structures of the ventral neck region	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
17/10/2025	12:00	13:30	Anatomy with Organogenesis of Domestic Animals III	P4 Mouth, salivary glands, pharynx and esophagus;	3E-1, 3E-2, 3E-3		1:30	Korpes K.	P_amfiteatar

Activities - Anatomy with Organogenesis of Domestic Animals III (4/7)

Start Dat	Start	End	Subject	Subject	Group	Note	Length	Instructor	Room
20/10/2025	8:15	9:45	Anatomy with Organogenesis of Domestic Animals III	v15 Temporomandibular joint	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
21/10/2025	8:15	9:45	Anatomy with Organogenesis of Domestic Animals III	p05 Upper respiratory tract, larynx and trachea;	3E-1, 3E-2, 3E-3		1:30	Nejedli S.	P_amfiteatar
21/10/2025	12:45	14:15	Anatomy with Organogenesis of Domestic Animals III	v16 Deep structures of facial regions	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
22/10/2025	8:15	9:45	Anatomy with Organogenesis of Domestic Animals III	v17 3rd activity test	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
23/10/2025	8:15	9:45	Anatomy with Organogenesis of Domestic Animals III	p06 Brain and spinal cord: structure and development	3E-1, 3E-2, 3E-3		1:30	Alić I.	P_amfiteatar
23/10/2025	11:45	13:15	Anatomy with Organogenesis of Domestic Animals III	v18 Mouth and oral cavity	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat

Activities - Anatomy with Organogenesis of Domestic Animals III (5/7)

Start Dat	Start	End	Subject	Subject	Group	Note	Length	Instructor	Room
24/10/2025	10:00	11:30	Anatomy with Organogenesis of Domestic Animals III	v19 Pharynx	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
27/10/2025	9:15	10:45	Anatomy with Organogenesis of Domestic Animals III	v20 External nose and nasal cavity	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
27/10/2025	13:00	13:45	Anatomy with Organogenesis of Domestic Animals III	p07 Cranial nerves	3E-1, 3E-2, 3E-3		0:45	Alić I.	P_amfiteatar
28/10/2025	10:00	11:30	Anatomy with Organogenesis of Domestic Animals III	v21 4th activity test (2 points): mouth and oral cavity,pharynx	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
28/10/2025	11:45	12:30	Anatomy with Organogenesis of Domestic Animals III	p08 Eye:structure and development	3E-1, 3E-2, 3E-3		0:45	Pavić Vulinović M.	P_amfiteatar
28/10/2025	12:30	13:15	Anatomy with Organogenesis of Domestic Animals III	p09 Vestibulocochlear organ:structure and development	3E-1, 3E-2, 3E-3		0:45	Pavić Vulinović M.	P_amfiteatar

Activities - Anatomy with Organogenesis of Domestic Animals III (6/7)

Start Dat	Start	End	Subject	Subject	Group	Note	Length	Instructor	Room
29/10/2025	11:45	13:15	Anatomy with Organogenesis of Domestic Animals III	v22 Paranasal cavities	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
30/10/2025	11:30	13:00	Anatomy with Organogenesis of Domestic Animals III	v23 Larynx	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
31/10/2025	14:30	16:00	Anatomy with Organogenesis of Domestic Animals III	v24 5th activity test (2 points)external nose and nasal cavity	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
03/11/2025	10:00	11:30	Anatomy with Organogenesis of Domestic Animals III	v25 Meninges and brain	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
04/11/2025	8:15	9:45	Anatomy with Organogenesis of Domestic Animals III	v26 Cranial nerves	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
05/11/2025	12:45	14:15	Anatomy with Organogenesis of Domestic Animals III	v27 Eye	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat

Activities - Anatomy with Organogenesis of Domestic Animals III (7/7)

Start Dat	Start	End	Subject	Subject	Group	Note	Length	Instructor	Room
06/11/2025	11:45	13:15	Anatomy with Organogenesis of Domestic Animals III	p10 Basic gross anatomy of domestic birds	3E-1, 3E-2, 3E-3		1:30	Nejedli S.	P_amfiteatar
06/11/2025	13:30	15:00	Anatomy with Organogenesis of Domestic Animals III	v28 Vestibulocochlear organ	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
07/11/2025	12:00	13:30	Anatomy with Organogenesis of Domestic Animals III	v29 6 th activity test	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
13/11/2025	8:15	9:45	Anatomy with Organogenesis of Domestic Animals III	v30 Avian osteology	3E-1, 3E-2, 3E-3		1:30	Nastavnici na predmetu	S_anatomija I kat
19/11/2025	15:30	17:45	Anatomy with Organogenesis of Domestic Animals III	v31 Dissection of the chicken	3E-1, 3E-2, 3E-3		2:15	Nastavnici na predmetu	S_anatomija I kat
Total: 41							58:30		

STUDENT OBLIGATIONS

Lectures attendance	The course has 15 hours of lectures. One hour of lecture (45 minutes) is equal to 0.4 points. Lecture attendance is graded with 6 points in total. The student has to attend at least 8 hours of lectures and achieve at least 3 points.
Practicals attendance	The course has 63 hours of practicals. One hour of practicals (45 minutes) is equal to 0.19 points. Practical attendance is graded with 12 points in total. The student has to attend at least 43 hours of practicals and achieve at least 8 points.
Active participation in practicals	Active participation in the practicals is evaluated through short oral testing during practicals and is graded with 10 points in total. The student has to achieve at least 5 points.
Final exam	Oral exam is graded with 40 points in total. The student has to achieve at least 24 points at the oral exam.
Examination requirements	Student requirements are defined in the Regulations on the Integrated Undergraduate and Graduate Study of Veterinary Medicine (2024). Given the above, the student must acquire a minimum number of points from all assessment elements in order to take the final exam. Regulations On Intergraduate And Graduate Studies, Article 41: a student can justifiably be absent from up to 50% of the lectures, 30% of the seminars and 30% of the exercises.

GRADING AND EVALUATING STUDENT WORK

Continuous knowledge-checking (mid-terms)	There are two written tests. A maximum of 16 points per test can be achieved. The student has to achieve at least 10 points per test in order to pass. The points of both passed tests are summarized. Both tests are graded together with a maximum of 32 points. Passing these two tests is a pre-condition for taking the oral exam. The written tests will be held in the Computer Halls of the Department for Animal Breeding and Livestock Production. Written test I will be held on 23/10/2025, 13:30-14:30, in the Large and Small Computer Hall (1st repetition: 25/11/2025, 8:30-9:30, Large Computer Hall; 2nd repetition: 8/12/2025, 15:00-16:00, Small Computer Hall). Written test II will be held on 20/11/2025, 15:00-16:00, in the Large and Small Computer Hall (1st repetition: 25/11/2025, 8:30-9:30, Large Computer Hall, 2nd repetition: 8/12/2025, 15:00-16:00, Small Computer Hall).
Final exams (dates)	3/12/2025, 4/02/2026, 18/02/2026 and supplemental examination terms that will be published in February 2026 for the summer semester
Form of final exam	Oral exam is graded with 40 points in total. The student has to achieve at least 24 points.

LITERATURE

Obligatory literature	KÖNIG, H. E., H.-G. LIEBICH (2007): Veterinary anatomy of domestic mammals, Textbook and color atlas. 3rd Ed. Schattauer, Stuttgart, New York DYCE, K. M., W. O. SACK, C. J. G. WENSING (2010): Textbook of veterinary anatomy. 4th Ed. Saunders Elsevier, Philadelphia. DONE, S. H., P. C. GOODY, S. A. EVANS, N. C. STICKLAND (2009): Color atlas of veterinary anatomy. Volume 3. The dog and cat. 2nd Ed. Mosby Elsevier, Edinburgh, London, New York. EVANS, H. E., A. de LAHUNTA (2010): Guide to the dissection of the dog. 7th Ed. Saunders Elsevier. Philadelphia. McGEADY, T. A., P. J. QUINN, E. S. FITZPATRICK, M. T. RYAN (2006): Veterinary embryology. Blackwell Publishing, Dublin.
Optional literature	NICKEL, R., A. SCHUMMER, E. SEIFERLE (1986): The locomotor system of the domestic mammals. Volume I. Verlag Paul Parey, Berlin, Hamburg. NICKEL, R., A. SCHUMMER, E. SEIFERLE (1981): The circulatory system, the skin, and the cutaneous organs of the domestic mammals. Volume III. Verlag Paul Parey, Berlin, Hamburg. EVANS H. E., A. De LAHUNTA (2012): Miller's anatomy of the dog. 4th Ed. WB Saunders Company, Philadelphia, London. SCHALLER, O. (2007): Illustrated veterinary anatomical nomenclature. 2nd Ed. Ferdinand Enke Verlag, Stuttgart. HYTTEL, P., F. SINOWATZ, M. VEJLSTED (2010): Essentials of domestic animal embryology. Saunders Elsevier, Philadelphia. SADLER, T. W. (2006): Langman's medical embryology, Lippincott Williams & Wilkins a Wolters Kluwer business. 10th Ed. Philadelphia, Baltimore, New York.

OBJECTIVES AND LEARNING OUTCOMES

Course objectives	The objective of the course is to introduce students to the macroscopic structure and embryonic development of the head and neck of domestic mammals so that they can follow and understand physiology, pathological anatomy and clinical subjects. "Anatomy with organogenesis of domestic animals III" implements a systematic approach to the interpretation and learning of organogenesis, morphology and topography of the head and neck of domestic mammals. In addition, the objective of this course is also to introduce students to the anatomy of poultry, and to point out the differences in structure between domestic mammals and poultry.
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Course: Anatomy with Organogenesis of Domestic Animals III

Learning outcomes

After completing the course and passing the final exam, the student will be able to:

1. describe and interpret the organization of the anatomical structures of the head and neck as a basis for clinical and public health assessment
2. recognize the differences in the anatomical structures of the head and neck in various domestic mammal species as a basis for clinical and public health assessment
3. distinguish the normal anatomical structure of the head and neck structures in order to recognize pathological changes
4. explain the principles of embryonic development of the anatomical structures of the head and neck in order to understand and assess congenital malformations
5. explain the mutual topographical and functional relationship of the anatomical structures of the head and neck as a basis for application in clinical work
6. identify and interpret anatomical structures of domestic poultry as a basis for clinical and public health assessment

GRADING SCHEME

<i>Points</i>	<i>Grade</i>
Up to 59	1 (F)
60-76	2 (D,E)
77-84	3 (C)
85-92	4 (B)
93-100	5 (A)

Course leader:



Assist. Prof. Mirela Pavić Vulinović

Head of Department/Clinic:



Assist. Prof. Mirela Pavić Vulinović

Note: The course leader is required to submit a Course Syllabus to all teachers and associates pertaining to the Course